

**Ischemia Modified Albumin, Cardiac Troponin T And N-Terminal Pro-B Type Natriuretic Peptide Levels in Infants Of Diabetic Mothers**

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**Introduction**

Maternal diabetes mellitus (MDM) is a risk for the health of both the pregnant women and her infant. It is reported that MDM increases oxidative stress and decreases antioxidant enzyme activities. Cardiomyopathy is noted in up to 40% of infants of diabetic mothers, and the exact mechanisms responsible for it are unknown. The aim of this study was to compare between infants of diabetic mothers (IDM) and healthy control newborns as regards of ischemia-modified-albumin (IMA), cardiac troponin-T (cTnT) and N-terminal brain natriuretic peptide (NT-proBNP) levels as markers of cardiac dysfunction.

**Method**

A prospective, comparative study included 40 infants of diabetic mother (IDM) as patient group and 40 healthy full term neonates as a control group. Umbilical cord blood IMA, Troponin T and NT-pro BNP levels were studied. Echocardiographic and electrocardiographic parameters were recorded in the first day of life.

**Results**

Interventricular septal thickness were higher in IDM group ( $p<0.05$ ). Myocardial performance index were significantly decreased in the IDM group ( $p<0.05$ ). The cord blood IMA, cTnT and NT-proBNP levels were higher in the IDM group compared with healthy control newborns, and the difference was statistically significant for IMA and NT-proBNP. IMA levels in IDM and control group were  $225.52\pm92.39$ ng/ml and  $147.05\pm87.41$  ng/ml respectively ( $p<0.05$ ). Cardiac troponin T levels were  $119.80\pm45.59$ pg/ml and  $102.55\pm42.65$ pg/ml without significant difference ( $p>0.05$ ). Cord blood NT-proBNP levels were  $2886.05\pm4280.66$ pg/ml and  $956.30\pm450.05$ pg/ml in IDM and control group respectively.

**Conclusions**

This study demonstrated elevated IMA and cardiac markers in asymptomatic infants of well controlled diabetic mothers, representing the subclinical cardiac findings.